Title (en)

MICROBIAL CONVERSION OF SUGAR ACIDS AND MEANS USEFUL THEREIN

Title (de)

MIKROBIELLE UMWANDLUNG VON ZUCKERSÄUREN UND DABEI NÜTZLICHE MITTEL

Title (fr)

CONVERSION MICROBIENNE D'ACIDES SACCHARIQUES ET MOYENS UTILISES DANS CETTE CONVERSION

Publication

EP 1885848 A4 20090909 (EN)

Application

EP 06743559 A 20060529

Priority

- FI 2006050217 W 20060529
- FI 20055263 A 20050530

Abstract (en)

[origin: WO2006128965A1] A DNA molecule comprising a fungal gene encoding an enzyme protein capable of converting L-galactonic acid into L-threo-3-deoxy-hexulosonic acid has been cloned and heterologously expressed. The enzyme is involved in the metabolic conversion of sugar acids, which are present in biological waste material such as sugar beet pulp and other pectin comprising material. A microorganism genetically modified to effectively express said enzyme may be used in fermenting biomaterial to desired end products such as ethanol. Alternatively, microorganisms in which the gene has been inactivated may be used to produce L- galactonic acid, which accumulates when the expression of the gene is prevented.

IPC 8 full level

C12N 9/08 (2006.01); **C12N 9/88** (2006.01); **C12N 15/53** (2006.01); **C12P 7/00** (2006.01); **C12P 7/58** (2006.01)

IPC 8 main group level

C12N (2006.01)

CPC (source: EP US)

C12N 9/88 (2013.01 - EP US); **C12P 7/58** (2013.01 - EP US); **C12P 19/02** (2013.01 - US); Y02P 20/52 (2015.11 - US)

Citation (search report)

- [A] EP 1496113 A1 20050112 - MITSUI CHEMICALS INC [JP]
- [PX] KUORELAHTI SATU ET AL: "L-galactonate dehydratase is part of the fungal path for D-galacturonic acid catabolism.", MOLECULAR MICROBIOLOGY AUG 2006, vol. 61, no. 4, August 2006 (2006-08-01), pages 1060 - 1068, XP002538985, ISSN: 0950-382X
- [A] ELSHAFEI A M ET AL: "Properties of enzymes involved in D-galactonate catabolism in fungi.", ANTONIE VAN LEEUWENHOEK 1995, vol. 67, no. 2, 1995, pages 211 - 216, XP008108841, ISSN: 0003-6072
- See references of WO 2006128965A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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